

Please amend the claims by substituting the following claims for the corresponding previously pending claims of the same number(s):

sub c6
1. ~~An isolated nucleic acid comprising a polynucleotide that hybridizes under stringent conditions to a SEQ ID NO:1, base pairs 57583-58854, wherein said polynucleotide encodes a protein that has an oxidase activity.~~

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2. The isolated nucleic acid of claim 1, wherein said nucleic acid comprises a nucleic acid encoding at least one additional open reading frame that encodes a polypeptide selected from the group consisting of SEQ ID NO:114, SEQ ID NO:113, SEQ ID NO:112, SEQ ID NO:111, SEQ ID NO:110, SEQ ID NO:109, SEQ ID NO:108, SEQ ID NO:107, SEQ ID NO:106, SEQ ID NO:105, SEQ ID NO:104, SEQ ID NO:103, SEQ ID NO:102, SEQ ID NO:101, SEQ ID NO:100, SEQ ID NO:99, SEQ ID NO:98, SEQ ID NO:97, SEQ ID NO:96, SEQ ID NO:95, SEQ ID NO:94, SEQ ID NO:93, SEQ ID NO:116, SEQ ID NO:117, SEQ ID NO:118, SEQ ID NO:119, SEQ ID NO:120, SEQ ID NO:121, SEQ ID NO:122, SEQ ID NO:123, SEQ ID NO:124, SEQ ID NO:125, and SEQ ID NO:126.

3. The isolated nucleic acid of claim 1, wherein said nucleic acid comprises a nucleic acid encoding at least two additional open reading frames encoding polypeptides independently selected from the group consisting of SEQ ID NO:114, SEQ ID NO:113, SEQ ID NO:112, SEQ ID NO:111, SEQ ID NO:110, SEQ ID NO:109, SEQ ID NO:108, SEQ ID NO:107, SEQ ID NO:106, SEQ ID NO:105, SEQ ID NO:104, SEQ ID NO:103, SEQ ID NO:102, SEQ ID NO:101, SEQ ID NO:100, SEQ ID NO:99, SEQ ID NO:98, SEQ ID NO:97, SEQ ID NO:96, SEQ ID NO:95, SEQ ID NO:94, SEQ ID NO:93, SEQ ID NO:116, SEQ ID NO:117, SEQ ID NO:118, SEQ ID NO:119, SEQ ID NO:120, SEQ ID NO:121, SEQ ID NO:122, SEQ ID NO:123, SEQ ID NO:124, SEQ ID NO:125, and SEQ ID NO:126.

B9
5. The isolated nucleic acid of claim 1, wherein said the sequence of said protein is SEQ ID NO:115. nucleic acid comprises a nucleic acid encoding a protein encoded by a gene selected from the group consisting of blmI, *blmII*, and blmXI.

9. An isolated nucleic acid comprising a nucleic acid encoding a protein comprising the sequence of SEQ ID NO:115.

B10 Sub C7 10. The nucleic acid of claim 9, wherein said nucleic acid wherein the sequence of said protein is SEQ ID NO:115.

Sub C8 12. The nucleic acid of claim 9, wherein said nucleic acid further comprises a nucleic acid encoding a protein encoded by blmVIII.

13. The nucleic acid of claim 9, wherein said nucleic acid further comprises a nucleic acid selected from the group consisting of blmI, blmII, and blmXI.

B11 14. The nucleic acid of claim 9, wherein said nucleic acid further comprises a nucleic acid selected from the group consisting of blmIII, blmIV, blmV, blmVI, blmVII, blmIX, and blmX.

15. The nucleic acid of claim 9, wherein said nucleic acid further comprises blmVIII.

B12 17. The nucleic acid of claim 9, wherein said isolated nucleic acid comprises a nucleic acid encoding a module.

Sub C9 B13 21. An isolated gene cluster comprising open reading frames encoding polypeptides sufficient to direct the assembly of a bleomycin or a bleomycin analogue.

Sub C10 B14 40. An expression vector comprising a nucleic acid of any one of claims 1, 2, 3, 5, 9, 10, 12, 13, 14, 15, 17, and 21.

72. The cell of claim 71, wherein said cell overexpresses a resistance gene from the bleomycin gene cluster.

B15 Sub C12 73. The cell of claim 72, wherein said resistance gene is a selected from the group consisting of blmA, and blmB.